

What Is Claimed Is:

1. A close region image extraction device for extracting a close region image that comprises a nearby object located in the vicinity of a cameraman from color moving images, comprising:

capture means for acquiring color moving images of the nearby object by using visible light;

an infrared light source for irradiating the nearby object with infrared light;

lighting control means that repeatedly turns the infrared light source alternately ON and OFF, in sync with the timing with which the capture means acquire field images;

infrared image acquiring means that alternately acquires a lit infrared image which is an infrared image of the nearby object when the infrared light source is lit, and an unlit infrared image which is an infrared image of the nearby object when the infrared light source is unlit, in sync with the timing with which the capture means acquire field images;

absolute value differential image acquiring means, which acquires an absolute value image for the difference between the lit infrared image and the unlit infrared image acquired in chronological succession, and wherein said absolute image is obtained by multiplying the subtracted values

of the lit infrared image from that of the unlit infrared image by minus 1 when the infrared image which corresponds to the current field image is a lit infrared image and the infrared image which corresponds to the previous field is an unlit infrared image; and

extracting means for extracting the close region image from the color moving images on the basis of the absolute value differential image acquired by the absolute value differential image acquiring means.

2. The close region image extraction device according to claim 1, wherein the optical axes of the capture means and the infrared image acquiring means are provided so as to coincide with each other.

3. The close region image extraction device according to claim 1, further comprising:

an image synthesizer, which synthesizes two chronologically successive field images that are acquired by the capture means, and a lit infrared image and an unlit infrared image acquired in sync with these two field images, respectively, to form a single image, and outputs this image to the absolute value differential image acquiring means,

wherein the image synthesizer synthesizes the two

field images, the lit infrared image and the unlit infrared image by reducing same such that the number of pixels thereof in the horizontal direction is halved, respectively, so as to form a single image.

4. The close region image extraction device according to claim 1, wherein the extracting means extract an object image that represents the nearby object by eliminating skin-colored regions from the close region image.

5. The close region image extraction device according to claim 1, further comprising:

an head-mounted display for displaying an object image extracted by the extracting means,

wherein the capture means, the infrared light source and the infrared image acquiring means are integrated with the head-mounted display and are provided so that the respective optical axes thereof lie within the field of view of the cameraman.

6. A close region image extraction device for extracting a close region image including a nearby object located in the vicinity of a cameraman from color moving images, said close region image extraction device comprising:

a first mounting unit, including:

capture means for acquiring color moving images of the nearby object by using visible light;

a pair of infrared light sources for irradiating the nearby object with infrared light;

lighting control means that repeatedly turns the infrared light source alternately ON and OFF, in sync with the timing with which the capture means acquire field images;

infrared image acquiring means that alternately acquires a lit infrared image which is an infrared image of the nearby object when the infrared light source is lit, and an unlit infrared image which is an infrared image of the nearby object when the infrared light source is unlit, in sync with the timing with which the capture means acquire field images;

a beam splitter provided between the infrared light source pair in a vertical direction for splitting a reflected light from the nearby object to the capture means and the infrared image acquiring means;

a second mounting unit including:

absolute value differential image acquiring means, which acquires an absolute value image for the difference between the lit infrared image and the unlit infrared image acquired in chronological succession, and wherein said absolute image is obtained by multiplying the subtracted values

of the lit infrared image from that of the unlit infrared image by minus 1 when the infrared image which corresponds to the current field image is a lit infrared image and the infrared image which corresponds to the previous field is an unlit infrared image; and

extracting means for extracting the close region image from the color moving images on the basis of the absolute value differential image acquired by the absolute value differential image acquiring means.

7. The close region image extracting device according to claim 6, wherein said first mounting unit further comprising a display unit for displaying moving images photographed by the capture means and said display unit is mountable around a head of a user.

8. The close region image extracting device according to claim 7, wherein said first mounting unit is so configured that it is mountable around the head of the user and said second mounting unit is so configured that it is mountable around a waist portion of the user.

9. The close region image extracting device according to claim 8, wherein the first mounting unit is so configured that

the beam splitter can be placed around a temple of the user.

10. A close region image extraction method for extracting a close region image that comprises a nearby object located in the vicinity of a cameraman from color moving images, comprising the steps of:

using the capture means to take color moving images of the nearby object;

repeatedly turning an infrared light source that irradiates the nearby object with infrared light alternately ON and OFF, in sync with the timing with which the capture means acquire field images;

using the infrared image acquiring means to alternately acquire a lit infrared image which is an infrared image of the nearby object when the infrared light source is lit, and an unlit infrared image which is an infrared image of the nearby object when the infrared light source is unlit, in sync with the timing with which the capture means acquire field images;

acquiring, when the infrared image which corresponds to the current field image is a lit infrared image and the infrared image which corresponds to the previous field is an unlit infrared image, an absolute value image for the difference between the lit infrared image and the unlit

infrared image which are in chronological succession, by rendering an image, which is obtained by multiplying the difference of the lit infrared image from the unlit infrared image by minus 1, an absolute value differential image; and

extracting the close region image from the color moving images acquired by the capture means on the basis of this absolute value differential image.